

## ABSTRACT OF THE DISCLOSURE

A wobble demodulator for reproducing digital information from an optical recording medium in which a track is formed in accordance with a wobble signal that is MSK-modulated so as to contain the digital information by a carrier signal with a predetermined frequency and a sine wave signal with a frequency different from that of the carrier signal, includes: a wobble signal detector for detecting a wobble signal of the track from the optical recording medium; a wobble PLL for detecting the carrier signal based on the wobble signal detected by the wobble signal detector; a multiplier for multiplying the carrier signal detected by the wobble PLL by the wobble signal detected by the wobble signal detector and outputting a multiplied output; a MSK detector for detecting a MSK modulation mark having a phase or a frequency different from that of the carrier signal, based on an integrated value obtained by integrating the multiplied output from the multiplier on a predetermined section basis; and a MSK synchronization detector for detecting a synchronization position with respect to the digital information, based on the MSK modulation mark detected by the MSK detector, wherein the MSK detector compares a continuous predetermined number of the integrated values with a first threshold value for detecting a central portion of the MSK modulation mark, a second threshold value for detecting leading and trailing edges of the MSK modulation mark, and a third threshold value for detecting non-modulated portions before and after the MSK modulation mark, and detects the MSK modulation mark based on a pattern of a comparison result.